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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/507,466	02/22/2000	David R. Brown	M3477.0000/P011	2426

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EXAMINER

NGUYEN, THONG Q

ART UNIT PAPER NUMBER

2872

DATE MAILED: 04/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

09/507,466

Applicant(s)

BROWN, DAVID R.

Examiner

Thong Q. Nguyen

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2002 and 22 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 6-10 and 12-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-18 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/22/2002 has been entered.

Response to Amendment

2. The present Office action is made in response to the Amendment (Paper No. 9) and the request for continued examination (Paper No. 12) filed by applicant on 02/25/2002 and 03/22/2002, respectively.

As a result of the enter of the Amendment (Paper No. 9), the present application now contains claims 1-3, 6-10 and 12-18.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-2 and 8-10, are rejected under 35 U.S.C. 102(b) as being anticipated by Chahroudi (U.S. Patent No. 5,198,922, of record).

Chahroudi discloses an optical system having three optical elements (1-3). The optical system is subjected to receive light from a light source so that the light is splitted into transmissive light or reflective light dependent upon the operation of the optical element (1) disposed between the other two optical elements (2, 3). In particular, the optical system (10) comprises a first element (3) having an entrance planar surface and an output roughed surface, a shutter (1) having both roughed entrance and emitted surface, and a second element (2) having an output planar surface and an entrance roughed surface. The roughed surface of each elements (2, 3) comprises a pattern of microwedged projections wherein light transmits through them will change the directions. The microwedged projections have different physical shapes with respect to each other in a three-dimensional configuration so that a light beam emitting from a microwedged projection will direct/guide in an optical path which is different from the optical path of another beam passing through other microwedged projection. As such, in comparison the optical element (3) with the optical device as claimed in the present

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claims, the optical element (3) of the optical system (10) provided by Chahroudi meets all of the limitations recited in the present claims.

5. Claims 1, 3, 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Hansen et al (U.S. Patent No. 6,081,376).

Hansen et al disclose an optical system having an optical element for polarizing an incident light beam. The polarizing element as described in columns 3-4, 7-8 and 11-12 and illustrated in figures 5A-5B comprises a plurality of microwedges (92, 93) formed on an output surface of a substrate (47). The microwedges as taught in columns 11-12 are different from each other. As such, the light reflected or transmitted through the different microwedges will differ from each other. It is also noted that the use of a texture surface having a pattern of structures/projections wherein each structure/projection has planar surfaces is indeed suggested as can be seen in column 12 and shown in figures 10-11.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-2, and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tedesco (U.S. Patent No. 5,861,990, of record) in view of Chahroudi (U.S. Patent No. 5,198,922, of record) or Hansen et al (U.S. Patent No. 6,081,376).

Tedesco discloses an optical device for receiving light from a light source so that the light outputting from the device is a diffusing light. The device (102) comprises a light entrance surface (104) and an output/exit light surface (106) wherein a pattern of

microwedged projections are formed. The microwedged projections have different physical shapes with respect to each other in a three-dimensional configuration so that a light beam emitting from a microwedged projection will direct/guide in an optical path which is different from the optical path of another beam passing through other microwedged projection. As such, light reflected from two adjacent microwedged projections will provide respectively non-adjacent portions of a pattern. See Tedesco, columns 3-4 and fig. 1, for example. It is noted that Tedesco does not disclose that each projections comprises planar surfaces as recited in the present claims 1 and 9. However, the feature concerning the planar shape of the output surface of the projections as claimed is merely that of a preferred embodiment and no criticality has been disclosed. The support for that conclusion is found in the present specification at page 12 and shown in figure 6 in which applicant has admitted that the output surface of the projections are curved surface. Furthermore, the concept of making a surface having a pattern formed thereon wherein the pattern comprises a set of smooth projections or irregularly/roughed projections are clearly suggested to one skilled in the art as can be seen in the optical system provided by either Chahroudi or Hansen et al. In particular, Chahroudi discloses two embodiments in which the pattern has a smooth projections (see the first embodiment shown in figure 1) or the pattern has a roughed/irregular projections of planar surfaces (see the second embodiment shown in figure 2). In the same viewpoint, at column 12 and shown in figures 10-11, Hansen et al also teach that the pattern can take the form of smooth shape for the projections (see figure 11) or an irregular shape of planar surfaces (see figure 10). Thus, it would have

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been obvious to one skilled in the art at the time the invention was made to modify the optical element provided by Tedesco by using a texture surface constituting by roughed/irregular structure of planar surfaces as suggested by either Chahroudi or Hansen et al for the purpose of improving the optical performance and meeting a particular design.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tedesco in view of either Chahroudi or Hansen et al as applied to claim 1 above, and further in view of Hoch et al (U.S. Patent No, 6,002,520, of record).

The combined product as provided by Tedesco and either Chahroudi or Hansen et al meets all of the device as claimed in present claim 6 except the feature of a lens for performing a Fourier transform operation. However, the use of a diffusing element in a system having a light source, a lens and a diffusing element is clearly disclosed in the art as can be seen in the optical system provided by Hoch et al. See columns 2-5 and figs. 1-4. Thus, it would have been obvious to one skilled in the art at the time the invention was made to utilize/apply the diffusing device provided by Tedesco and either Chahroudi or Hansen et al in an optical system having a lens disposed in front of the diffusing device as suggested by Hoch et al so that the lens will perform a Fourier transform operation of the light before it enters the diffusing element.

Allowable Subject Matter

9. Claims 12-16 are allowed over the cited art.

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Response to Arguments

10. Applicant's arguments with respect to the rejected claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

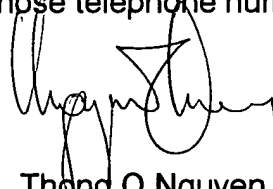
Conclusion

11. The additional references are cited as of interest in that each discloses an optical element having an irregular output surface.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q Nguyen whose telephone number is 703 308 4814. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on 703 308 1687. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308 7724 for regular communications and 703 308 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.



Thong Q Nguyen
Primary Examiner
Art Unit 2872

April 10, 2002